

**IN THE CLAIMS:**

Please amend the claims as follows:

1-44. (Cancelled)

45. (Previously Presented) A medical system to analyze brain waves of a subject comprising:

- (a) an active EEG (electroencephalograph) electrode detecting a subject's brain waves;
- (b) stimulus means providing to the subject concurrent sense stimuli in a plurality of stimulus modes, the stimuli in a first one of the modes being at frequency  $F_1$  and the stimuli in a second one of the modes being at a frequency  $F_2$ ;
- (c) an amplifier amplifying and digitizing the detected brain waves;
- (d) ratio means receiving the digitized brain waves from (c) and producing subject brain wave F ratio data as a function of a power of brain responses at each of  $F_1$  and  $F_2$  in the presence and absence of stimulation;
- (e) a receiver including a computer which compares the subject brain wave F ratio data from (d) with one of brain wave F ratio data generated as a function of one of data from (i) a normal group of patients and (ii) data generated by the subject in the presence and absence of stimulation;
- (f) a warning means situated in the receiver and warning when the comparison of (e) indicates one of injury to and dysfunction of one of the subject's spinal cord, brain stem and brain; and
- (g) modulating means modulating a carrier wave and the amplified brain waves, the modulating means generating an audio signal therefrom.

46. (Previously Presented) The medical system according to claim 45, wherein a statistical evaluation of computed measures from a subject is determined by computing a Z-score, where Z

= (M-P)/6, wherein M is a mean value of a normative distribution, P is a current measure from the subject and 6 is a standard deviation of a normal age- matched population.

47. (Previously Presented) The medical system according to claim 45, further comprising:  
a radio broadcast transmitter; and  
a headband situating thereon the electrode, the amplifier and the radio broadcast transmitter.

48. (Currently Amended) A medical system to analyze brain waves of a subject, comprising:  
(a) an active EEG (electroencephalograph) electrode detecting a subject's analog brain waves;  
(b) connection means removably connecting the electrode to a subject's head;  
(c) an amplifier situated on the connection means, the amplifier amplifying the detected brain waves;  
(d) radio broadcast means situated on the connection means, the radio broadcast means generating a brain wave broadcast signal by modulating a carrier signal based on the detected analog brain waves, the radio broadcast means broadcasting the brain wave broadcast signal;  
(e) a receiver receiving and amplifying the broadcast brain wave signal; and  
(f) sound generating means situated in coupled to the radio receiver, the sound generating means demodulating the amplified broadcast brain wave signals and converting demodulated brain waves into tone-like sounds.

49. (Previously Presented) The medical system according to claim 48, wherein the connection means includes a headband.

50. (Currently Amended) The medical system according to claim 48, wherein the radio receiver means includes a filter which ~~selects~~ separates a frequency band from a group of frequency bands of the broadcast brain wave signals.

51. (Previously Presented) The medical system according to claim 50, wherein the group of frequency bands includes delta, theta, alpha and beta bands.

52. (Currently Amended) A medical system to analyze brain waves of a subject, comprising:

- (a) an *EEG* (electroencephalograph) electrode for detecting a subject's brain waves;
- (b) attachment means coupled to the electrode and removably attaching the electrode to a subject's head;
- (c) an amplifier connected to the electrode for amplifying the detected brain waves;
- (d) analog/digital convertor means digitizing the detected brain waves and producing digitized brain wave data therefrom;
- (e) a radio transmitter situated on the attachment means and broadcasting the subject's brain waves wave data after amplification and modulation;
- (d) (e) a remote radio receiver and demodulator receiving and demodulating the broadcast brain waves wave data; and
- (e) (f) an output device generating an output signal based on the broadcast brain waves a computer comparing the subject's brain wave data with a brain wave data base based upon a normal group of subjects stored in the analyzer means; and
- (f) a warning means situated on the attachment means and on the receiver, the warning means warning if the comparison of (e) indicates brain injury.

53. (Currently Amended) The medical system according to claim 52, further comprising warning means warning when the output signal indicates brain injury, wherein the warning means includes one of a plurality of lights; lights and an audio device and an alphanumeric display panel.

54. (Previously Presented) The medical system according to claim 52, wherein the attachment means includes a patch and the electrode includes an active electrode, a reference and a ground.

55. (Previously Presented) The medical system according to claim 52, wherein the transmitter means includes one of a radio transmitter and a cellular telephone.

56. (Cancelled)

57. (Cancelled)

58. (Cancelled)

59. (Currently Amended) The medical system according to claim 52, comprising producing means situated in the receiver, the wherein the output device produces the output signal using producing means producing an audio output from a broadcast carrier modulated based on the subject's brain waves.

60. (Cancelled)

61. (Cancelled)

62. (Cancelled)

63. (Cancelled)

64. (Cancelled)

65. (Previously Presented) The medical system according to claim 52, wherein the

attachment means includes a headband.

66. (Previously Presented) The medical system according to claim 52, comprising:  
at least three electrodes;  
three amplifiers; and  
reference and ground electrodes.

67. (Cancelled)

68. (Currently Amended) A medical method to analyze brain waves of a subject, comprising the steps of:

- (a) removably connecting an active EEG (electroencephalograph) electrode to a head of the subject using connection means;
- (b) detecting the subject's analog brain waves;
- (c) amplifying the detected brain waves using an amplifier situated on the connection means;
- (d) generating a brain wave broadcast signal, using radio broadcast means situated on the connection means by modulating a carrier signal based on the detected analog brain waves;
- (e) broadcasting the brain wave signal;
- (f) receiving and amplifying the broadcast brain wave signal using a hand-held radio receiver; and
- (g) generating sounds based on the brain wave signals using the hand-held receiver by demodulating the amplified broadcast brain wave signals.